

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188							
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<b>1. REPORT DATE</b> 14-10-2016		<b>2. REPORT TYPE</b> final		<b>3. DATES COVERED (From - To)</b> March 2016 - October 2016							
<b>4. TITLE AND SUBTITLE</b> <div style="text-align: right; margin-top: 10px;">12th international Congress of Neuroethology</div>			<b>5a. CONTRACT NUMBER</b> N62909-19-1-2062  <b>5b. GRANT NUMBER</b> GRANT12046168  <b>5c. PROGRAM ELEMENT NUMBER</b> 1000004141								
<b>6. AUTHOR(S)</b> <div style="margin-top: 5px;">             Ana Silva              Associate Professor              Facultad de Ciencias              Iguá 4225              11400 Montevideo              URUGUAY           </div>			<b>5d. PROJECT NUMBER</b> N00014-16-R-BA01  <b>5e. TASK NUMBER</b>   <b>5f. WORK UNIT NUMBER</b>								
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<b>12. DISTRIBUTION/AVAILABILITY STATEMENT</b> This report can be available for the public											
<b>13. SUPPLEMENTARY NOTES</b>											
<b>14. ABSTRACT</b> This grant was awarded to support the 12th International Congress of Neuroethology (ICN) held in Montevideo, Uruguay, March 30-April 3, 2016. ICN is the major scientific meeting of the International Society for Neuroethology (ISN, <a href="http://www.neuroethology.org">www.neuroethology.org</a> ) that promotes to alternate the venue for ICN between continents. For the first time, the ICN2016 took place in South America, becoming the major Neuroscience meeting ever held in Uruguay with 519 participants from 32 countries of 5 continents. The Local Organizing Committee was formed by representatives from Uruguay, Argentina, Brazil and Chile, chaired by Dr. Ana Silva. The Program Committee co-chairs, Dr. Martin Giurfa (Paul Sabatier University, France) and Dr. Jose Pena (Albert-Einstein-College of Medicine, USA), coordinated the organization of ICN2016 Program, with two founders lectures (Heiligenberg and Huber Lectures), seven plenary lectures, four Young Investigator Awards talks, a Presidential Symposium, 12 contributed symposia, four participant symposia, and two poster sessions. The ICN2016 had a similar number of participants than previous ICNs, with a clear bias towards Latin American countries (30% participants), most attending the ICN for the first time, 15 of them supported by this grant together with the apps and program book that were fundamental tools for the success of this meeting.											
<b>15. SUBJECT TERMS</b> International Congress of Neuroethology First time in South America 519 participants, 32 countries, 5 continents, 30% from South America											
<b>16. SECURITY CLASSIFICATION OF:</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 33%; padding: 2px;">a. REPORT</td> <td style="width: 33%; padding: 2px;">b. ABSTRACT</td> <td style="width: 33%; padding: 2px;">c. THIS PAGE</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>			a. REPORT	b. ABSTRACT	c. THIS PAGE				<b>17. LIMITATION OF ABSTRACT</b> <div style="margin-top: 10px; text-align: center;">UU</div>		<b>18. NUMBER OF PAGES</b>
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			<b>19a. NAME OF RESPONSIBLE PERSON</b> ANA SILVA  <b>19b. TELEPHONE NUMBER (Include area code)</b> +598 99584156								

# FEDERAL FINANCIAL REPORT

(Follow form instructions)

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b>  Office of Naval Research Global		<b>2. Federal Grant or Other Identifying Number Assigned by Federal Agency</b> (To report multiple grants, use FFR Attachment)  N62909-19-1-2062		Page <b>1</b> of  pages																																
<b>3. Recipient Organization (Name and complete address including Zip code)</b> Facultad de Ciencias, Iguá 4225, 11400 Montevideo, URUGUAY																																				
<b>4a. DUNS Number</b>  966008323	<b>4b. EIN</b>	<b>5. Recipient Account Number or Identifying Number</b> (To report multiple grants, use FFR Attachment)  901-179-002609-0	<b>6. Report Type</b> <input type="checkbox"/> Quarterly <input type="checkbox"/> Semi-Annual <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Final	<b>7. Basis of Accounting</b>  <input checked="" type="checkbox"/> Cash <input type="checkbox"/> Accrual																																
<b>8. Project/Grant Period</b> From: (Month, Day, Year) <span style="margin-left: 50px;">03/30/2016</span> To: (Month, Day, Year) <span style="margin-left: 50px;">04/03/2016</span>		<b>9. Reporting Period End Date</b> (Month, Day, Year) <span style="margin-left: 50px;">06/20/2016</span>																																		
<b>10. Transactions</b>					Cumulative																															
(Use lines a-c for single or multiple grant reporting)																																				
<b>Federal Cash (To report multiple grants, also use FFR Attachment):</b>																																				
a. Cash Receipts					<b>11724.82</b>																															
b. Cash Disbursements					<b>11724.82</b>																															
c. Cash on Hand (line a minus b)					<b>0</b>																															
(Use lines d-o for single grant reporting)																																				
<b>Federal Expenditures and Unobligated Balance:</b>																																				
d. Total Federal funds authorized																																				
e. Federal share of expenditures																																				
f. Federal share of unliquidated obligations																																				
g. Total Federal share (sum of lines e and f)																																				
h. Unobligated balance of Federal funds (line d minus g)																																				
<b>Recipient Share:</b>																																				
i. Total recipient share required																																				
j. Recipient share of expenditures																																				
k. Remaining recipient share to be provided (line i minus j)																																				
<b>Program Income:</b>																																				
l. Total Federal program income earned																																				
m. Program income expended in accordance with the deduction alternative																																				
n. Program income expended in accordance with the addition alternative																																				
o. Unexpended program income (line l minus line m or line n)																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 10%;">a. Type</th> <th style="width: 10%;">b. Rate</th> <th style="width: 10%;">c. Period From</th> <th style="width: 10%;">Period To</th> <th style="width: 10%;">d. Base</th> <th style="width: 10%;">e. Amount Charged</th> <th style="width: 10%;">f. Federal Share</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="vertical-align: top;">11. Indirect Expense</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5"></td> <td style="text-align: right;">g. Totals:</td> <td></td> <td></td> </tr> </tbody> </table>							a. Type	b. Rate	c. Period From	Period To	d. Base	e. Amount Charged	f. Federal Share	11. Indirect Expense																				g. Totals:		
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<b>12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation:</b>																																				
<b>13. Certification: By signing this report, I certify that it is true, complete, and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent information may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)</b>																																				
a. Typed or Printed Name and Title of Authorized Certifying Official  <div style="text-align: center;"> <b>Ana Silva</b>                      Associate Professor, Facultad de Ciencias                 </div>					c. Telephone (Area code, number and extension) <b>+598 99584156</b>																															
b. Signature of Authorized Certifying Official  					d. Email address <b>asilva@fcien.edu.uy</b>																															
					e. Date Report Submitted (Month, Day, Year) <b>10/14/2016</b>																															
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# **ICN2016** **URUGUAY**

## **XII Congress**

**International Society for Neuroethology**

**March 30<sup>th</sup> - April 3<sup>rd</sup>, 2016**

**Satellite Activities: March 28 - 30, 2016**

**Radisson **Montevideo** Victoria Plaza Hotel**

**[www.icn2016.uy](http://www.icn2016.uy)**



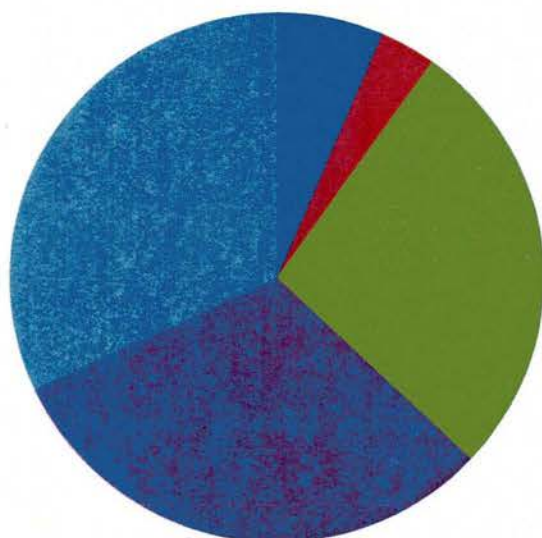
# ATTENDEES

495 ATTENDEES

24 ACCOMPANYING PERSONS

32 COUNTRIES: 30% LATIN AMERICAN

ICN2016 MONTEVIDEO



- Asia
- Oceania
- S America
- N America
- Europe





# SATELLITE ACTIVITIES



## III Latin American School of Neuroethology

March 20 – April 3, 2016

Buenos Aires, Argentina – Montevideo, Uruguay

Organizers: Lidia Szczupak, Argentina & Daniel Tomsic, Argentina

Coordination in Uruguay: Kent Dunlap, USA; Adriana Migliaro, Uruguay; Ana Silva, Uruguay; Lucía Zubizarreta, Uruguay

Faculty: Ana Amador, Argentina; Fernanda Ceriani, Argentina; Kent Dunlap, USA; Martin Giurfa, France; Jan Hemmi, Australia; Kim Hoke, USA; John Lewis, Canada; Fernando Locatelli, Argentina; Gabriel Mindlin, Argentina; Emanuel Mora, Cuba; Lauren O'Connell, USA; Jose Luis Peña, USA; Ana Silva, Uruguay; Lidia Szczupak, Argentina; Daniel Tomsic, Argentina



Students: Iván Beltrán, Colombia; Agustina Cano, Argentina; Susana Delgado, Cuba; Dardo Ferreiro, Brazil; Dennis Francos, Cuba; Marina Galleazzo, Brazil; Linda Hernández, Colombia; Estela Lanza, Argentina; Matías Muñoz, Chile; Melisa Pavez, Chile; Lizeth Pedraza, Colombia; Sofía Polcowñuk, Argentina; Mauro Ramírez, Brazil; Guillermo Reherrmann, Uruguay; Federico Reyes, Uruguay; Esteban Salazar, Chile; Rodrigo Sierra, Brazil





# SATELLITE ACTIVITIES



## III Latin American School of Neuroethology

March 20 – April 3, 2016

Buenos Aires, Argentina – Montevideo, Uruguay







# SATELLITE ACTIVITIES



## Electric Fish: Electrosensory and Electromotor Systems

March 28-29, 2016

Instituto de Investigaciones Biológicas Clemente Estable, Montevideo, Uruguay

Organizers: Angel Caputi, Uruguay; Marita Castelló, Uruguay, Len Maler, Canada; Laura Quintana, Uruguay; Gerhard von der Emde, Germany

LOC Hosts: Angel Caputi & Laura Quintana, Uruguay

67 attendees



## Amphibian Brains Behavior and Evolution

March 29, 2016

Presidencia de la República, Montevideo, Uruguay

Organizers: Kim Hoke, USA; Lauren O'Connell, USA, Eric Zornik, USA

LOC Host: Paula Pouso, Uruguay

28 attendees



# SATELLITE ACTIVITIES



## Auditory Processing, Sound Production, and Motor Control

March 29, 2016

Museo de Historia Natural Carlos Torres de la Llosa, Montevideo, Uruguay

Organizers: Ana Amador, Argentina; Sarah Bottjer, Ufrederick Theunnissen, USA; Daniel Margoliash, USA; Coen Elemans, Denmark

LOC Host: Javier Nogueira, Uruguay

48 attendees



## Vision with Few Photons

March 29, 2016

Centro de la Cooperación Española, Montevideo, Uruguay

Organizers: Almut Kelber, Sweden; Carola Yovanovich, Sweden

LOC Host: Ana Silva, Uruguay

42 attendees





# SATELLITE ACTIVITIES



## Neuroethology of Disease Vector Insects

March 29, 2016

Facultad de Química, Universidad de la República, Montevideo, Uruguay

Organizers: Claudio Lazzari, France; Marcelo Lorenzo, Brazil

LOC Host: Andrés González, Uruguay

28 attendees



## Neural and Behavioral Plasticity in Social Insects

March 29, 2016

Facultad de Química, Universidad de la República, Montevideo, Uruguay

Organizers: Walter Farina, Argentina; Jean Marc Devaud, France

LOC Host: Andrés González, Uruguay

68 attendees



# SATELLITE ACTIVITIES



## Post-Congress Course

Electrosensory system, development and evolution & Reproduction of tropical freshwater fishes with Special focus on gymnotiforms and mormyrids

April 4-15, 2016, Instituto de Investigaciones Biológicas Clemente Estable, Montevideo, Uruguay

Organizer: Marita Castelló, Instituto de Investigaciones Biológicas Clemente Estable, Uruguay

Faculty included 16 attendees to the ICN2016



## Post-Congress Course

Lessons from neuroethology to Cognitive Neuroscience

March 29 -April 7, 2016, Espacio Interdisciplinario, UdelaR, Montevideo, Uruguay

Organizer: Juan Valle Lisboa, Facultad de Psicología, UdelaR, Uruguay

Faculty included 12 attendees to the ICN2016



## Post-Congress Course

Introductory Course to New generation sequentiation techniques

April 4-8, 2016, Institutio Pasteur-Montevideo, Facultad de Ciencias, UdelaR, Montevideo, Uruguay

Organizer: Laura Quintana, Instituto de Investigaciones Biológicas Clemente Estable, Uruguay

Faculty included 4 attendees to the ICN2016





# SATELLITE ACTIVITIES



## II Meeting of Neuroethology in the Southern Cone

March 30, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

Organizers: Jose Alves-Gomes, Brazil; Martín Berón de Astrada, Argentina; Fernando Locatelli, Argentina; Violeta Medan, Argentina; Theo Mota, Brazil; Rossana Perrone, Uruguay; Natalia Uriarte, Uruguay; Nelson Velasquez, Chile

Coordination: Rossana Perrone, Uruguay; Natalia Uriarte, Uruguay

200 attendees

Speakers: Andrés Vidal-Gadea, Uruguay-USA; Gabriel Mindlin, Argentina; Alessandra Guarneri, Brazil; Rodrigo Suárez, Chile-Australia; Matías Pandolfi, Argentina; Rodrigo Vázquez, Chile; Jerome Braon, Brazil; Daniella Agrati, Uruguay; Alejandro Delorenzi, Argentina; Eduardo Benedicto Ottoni, Brazil; Patricio Ahumada; Chile; Claudio Lazzari, Argentina-France; Laura Quintana, Uruguay





# SATELLITE ACTIVITIES



## II Meeting of Neuroethology in the Southern Cone March 30, 2016







# PROGRAM



## 2 Distinguished Conferences

- The Franz Huber Lecture

Gene Robinson, Illinois University, USA

March 31, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay



- The Walter Heiligenberg Lecture

Dora Angelaki, Baylor College of Medicine, USA

April 2, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay





# PROGRAM



## 7 Plenary Lectures

- Catharine Rankin, University of British Columbia, Canada  
March 31, 2016,
- Adam Kepecs, Cold Spring Harbor Laboratory, USA  
April 1, 2016
- Anupama Dahanukar, University of California Riverside, USA  
April 1, 2016
- Daniel Tomsic, Universidad de Buenos Aires, Argentina  
April 2, 2016







# PROGRAM



## 7 Plenary Lectures

- Suzana Herculano-Houzel, Universidade de Rio De Janeiro, Brazil  
April 2, 2016
- Richard Benton, University of Lausanne, Switzerland  
April 3, 2016
- Andreas Nieder, University of Tübingen, Germany  
April 3, 2016





# PROGRAM

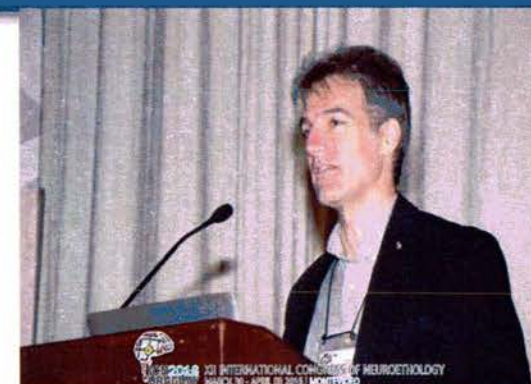


## Presidential Symposium

March 31, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

- Kenneth Catania, Vanderbilt University, USA
- Stephanie White, University of California, Los Angeles, USA
- Emanuel Mora, University of Havana, Cuba
- Baldomero Olivera, University of Utah, USA
- Daniel Robert, Bristol University, UK
- Tetsuro Matsuzawa, Kyoto University, Japan







# PROGRAM



## Young Investigators Award Symposium

April 1, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

- Arseny Finkelstein, Weizmann Institute of Science, Israel
- Carola Städele, Illinois State University, USA
- Avner Wallach, University of Ottawa, Canada
- Sara Wasserman, University of California, Los Angeles, USA





# PROGRAM



## 12 Invited Symposia

April 1, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

### I. BEHAVIORAL AND NEURAL GENOMICS OF SOCIALITY

Chair: Rui F. Oliveira, Gulbenkian Institute of Science, Portugal

### II. COMPARATIVE VIEW OF THE OPTIC TECTUM: A GLIMPSE INTO THE EVOLUTION OF GOAL-ORIENTED BEHAVIORS AND ATTENTION IN VERTEBRATES

Chairs: Germán Sumbre, Ecole Normale Supérieure, Paris, France and Yoram Gutfreund, Institute of Technology, Haifa, Israel

### III. SENSORIMOTOR INTEGRATION IN VOCAL PRODUCTION AND LEARNING IN SONGBIRDS

Chair: Ana Amador, University of Buenos Aires, Buenos Aires, Argentina





# PROGRAM



## 12 Invited Symposia

April 2, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

### IV. FAR FROM A 'FEATHER BRAIN': HIGHER COGNITIVE FUNCTIONS AND THEIR NEURAL SUBSTRATES IN FISH

Chair: Leonard Maler, University of Ottawa, Canada

### V. NEUROETHOLOGY OF PARALLEL OLFACTORY PROCESSING IN INSECTS AND VERTEBRATES

Chairs: Jean-Christophe Sandoz, National Centre for Scientific Research, France and Wolfgang Rössler, University of Würzburg, Germany

### VI. MIRROR NEURONS IN PRIMATES

Chair: Pier Francesco Ferrari, University of Parma, Italy



# PROGRAM



## 12 Invited Symposia

April 3, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

### VII. NEURONAL MECHANISMS UNDERLYING TARGET DETECTION

Chairs: Paloma Gonzalez-Bellido, Cambridge University, UK and Karin Nordström, Uppsala University, Sweden

### VIII. THE COGNITIVE APPROACH TO BEHAVIOR AND ITS LESSONS FOR NEUROSCIENCE

Chair: Juan Valle Lisboa, Universidad de la República, Uruguay

### IX. NEWS ON THE SENSORY WORLD OF BIRDS

Chair: Christine Köppl, Carl von Ossietzky University, Germany

### X. NEURAL MECHANISMS OF SPATIAL PERCEPTION AND NAVIGATION

Chair: Khaleel Razak, University of California, USA

### XI. EVOLUTIONARY MECHANISMS OF SENSORY LOSS AND REGAIN

Chairs: Jakob Christensen-Dalsgaard, University of Southern Denmark, Denmark and Kim Hoke, Colorado State University, USA

### XII. A BRAIN WITHIN THE BRAIN: SENSORY INTEGRATION AND NETWORK LOGIC OF THE DROSOPHILA CIRCADIAN CLOCK

Chairs: Fernanda Ceriani, Institute Leloir, Argentina and Joerg Albert, University College London, UK





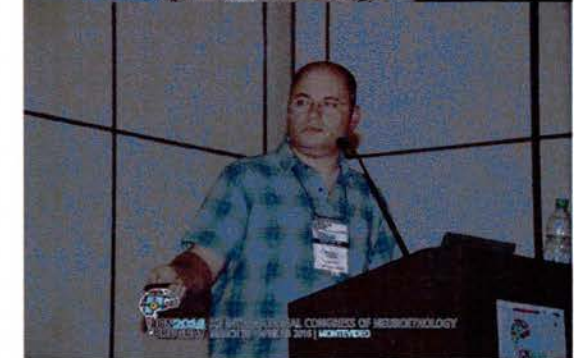
# PROGRAM



## 3 Participant Symposia + ISN/Neuroframes Symposium

April 1, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay





# PROGRAM



## 2 Poster Sessions

- Session I

March 31, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

18 Topics

140 posters

- Session II

April 2, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

18 Topics

141 posters







# SOCIALS & CULTURE



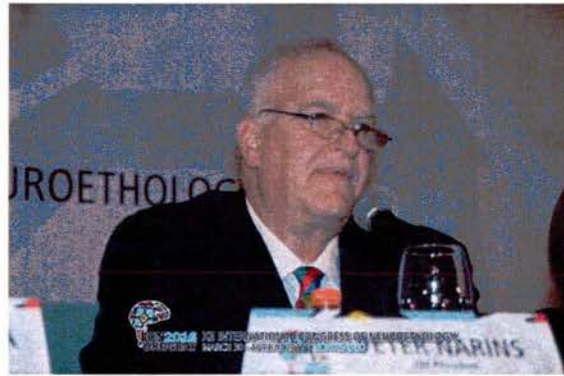
## Opening Session

March 30, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

### - Welcome Speeches

Ana Silva, 2016 ICN Local Organizing Committee, Chair Martín Giurfa & José Luis Peña, 2016 ICN Program Committee Co-Chairs Peter Narins, International Society for Neuroethology, President Roberto Markarián, Universidad de la República, Chancellor Gabriel Aintablián, Ministerio de Educación y Cultura, on behalf of the Minister







# SOCIALS & CULTURE



## Opening Session

March 30, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay







# SOCIALS & CULTURE



## Opening Session

March 30, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

- Neuroethology: Tales from South America

Chairs: Angel Caputi & Leonel Gómez

Documentary of the history of Neuroethology and its model systems in South America

Homage to mentors of South American Neuroethology

Welcome to the Far South, Omar Macadar, Uruguay

The Potential and Promise of Neuroethology for Latin America: A View from the North, John Hildebrand, USA



[www.youtube.com/watch?v=qZBGYDdPdDg](http://www.youtube.com/watch?v=qZBGYDdPdDg)





# SOCIALS & CULTURE



## Welcome Party

March 30, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay

- Tango Show  
Mario Penna & band







# SOCIALS & CULTURE



## Art Exhibition COLECTIVONEGROS

March 30- April 3, 2016

Radisson Victoria Plaza Convention Center, Montevideo, Uruguay







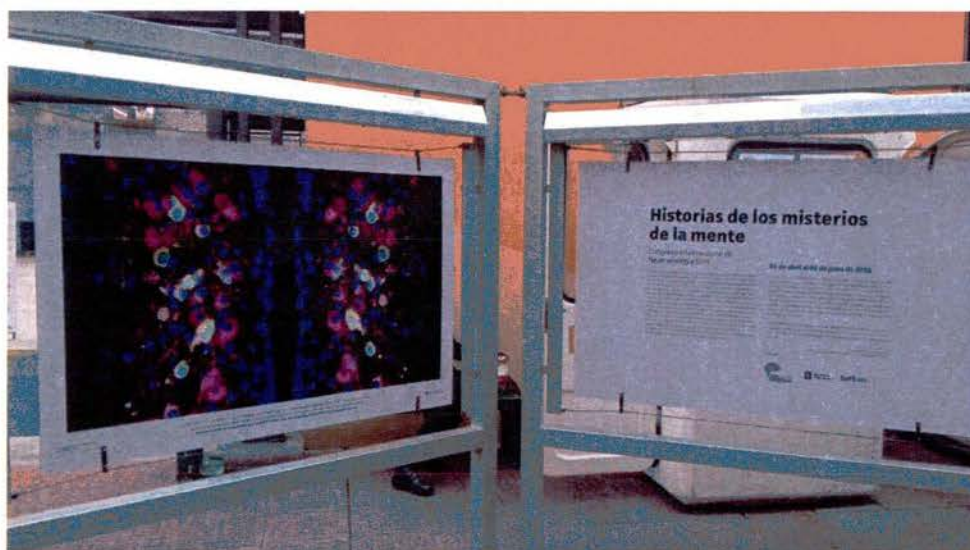
# SOCIALS & CULTURE



## Photo Gallery Stories of Mind Mysteries

April 1- June 2, 2016

Espacio a Cielo Abierto-Ciudad Vieja, Montevideo, Uruguay



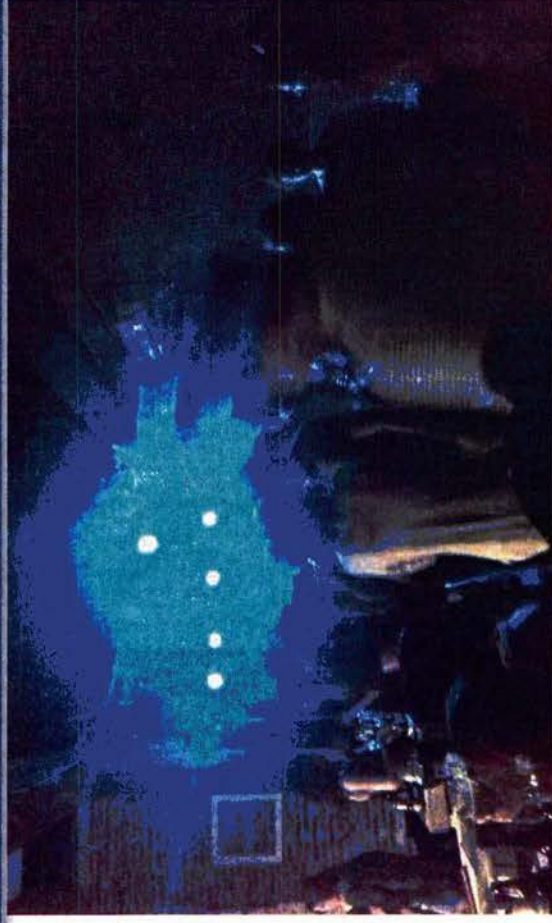




# SOCIALS & CULTURE



Student-Postdoc Mixer  
April 1, 2016  
Complejo Cultural Platea Sur, Montevideo, Uruguay







# SOCIALS & CULTURE



Final Banquet  
April 3, 2016  
Club Uruguay, Montevideo, Uruguay







# SPONSORS





**ICN 2016**  
**URUGUAY**  
XII INTERNATIONAL CONGRESS OF NEUROTHEOLOGY  
MARCH 30 - APRIL 03 2016 | MONTEVIDEO



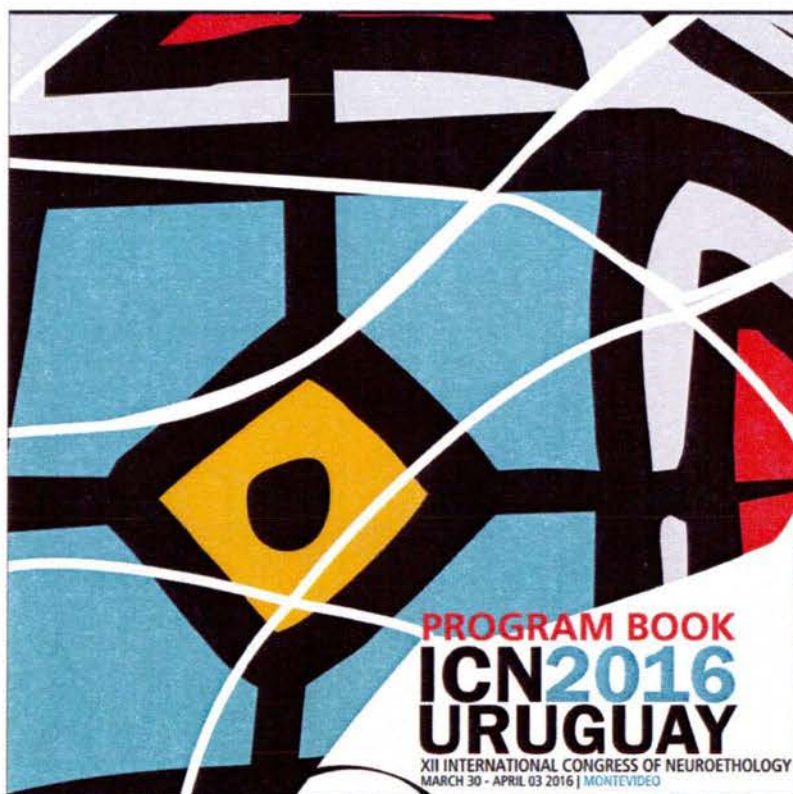
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# SPONSORS





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## III LATIN AMERICAN SCHOOL OF NEUROETHOLOGY

March 20 - April 3

## II MEETING OF NEUROETHOLOGY IN THE SOUTHERN CONE

March 30  
8:30 - 17:00

### REGISTRATIONS

Late registrations  
are open.

Registrations will be  
accepted on site

## SPONSORS

Acoustical Society of America



Behavioral and Brain Sciences



Center for Integrative Animal  
Behavior



Albert Einstein College of  
Medicine



The Company of Biologists



## SATELLITE MEETINGS

March 28-29

**Electric Fish**  
Electrosensory and  
Electromotor systems

March 29

**Amphibian Brains**  
Behavior,  
and Evolution

March 29

**Auditory processing,**  
sound production  
and motor control

March 29

**Neuroethology**  
of disease





# SPONSORS







# PRESS RELEASES



Montevideo Portal: <http://www.montevideo.com.uy/auc.aspx?303429>



Portal UdelaR: <http://www.universidad.edu.uy/prensa/renderItem/itemId/38706/refererPagId/12>



La República: <http://www.republica.com.uy/uruguay-recibe-al-congreso-internacional-neuroetologia/563343/>



La Diaria: [http://www.icn2016.uy/download/ladiaria\\_press.pdf](http://www.icn2016.uy/download/ladiaria_press.pdf)



Búsqueda: <http://www.busqueda.com.uy/nota/hay-una-interaccion-entre-la-genetica-y-el-comportamiento-social-para-avanzar-es-necesario-ser/ls-575-ccc9ca8267b1d23bf2dd>



Neuroethology: Tales from South America: [www.youtube.com/watch?v=qZBGYDdPdDg](http://www.youtube.com/watch?v=qZBGYDdPdDg)





# ABOUT US



International Society for Neuroethology

[www.neuroethology.org](http://www.neuroethology.org)

## Executive Council

President:

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Catharine Rankin, University of British Columbia, Canada

Past President:

Alison Mercer, University of Otago, New Zealand

Treasurer:

Karen Mesce, University of Minnesota, USA

Secretary:

Susan Fahrbach, Wake Forest University, USA



# ABOUT US



## International Congress of Neuroethology 2016

[www.neuroethology.org](http://www.neuroethology.org)

### Local Organizing Committee

Chair: Ana Silva, Fac. de Ciencias, Udelar – Instituto de Investigaciones Biológicas Clemente Estable, MEC

Jose Alves-Gomes, Instituto Nacional Pesquisas da Amazonia, Brazil

Gervasio Batista, Albert Einstein College of Medicine, USA

Angel Caputi, Instituto de Investigaciones Biológicas Clemente Estable, MEC

Annabel Ferreira, Fac. de Ciencias, Udelar

Leonel Gómez, Fac. de Ciencias, Udelar

Andrés González, Fac. de Química, Udelar

Omar Macadar, Fac. de Medicina, Udelar – Instituto de Investigaciones Biológicas Clemente Estable, MEC

Adriana Migliaro, Fac. de Ciencias, Udelar – Instituto de Investigaciones Biológicas Clemente Estable, MEC

Javier Nogueira, Fac. de Medicina, Udelar

Mario Penna, Universidad de Chile, Chile

Rossana Perrone, Instituto de Investigaciones Biológicas Clemente Estable, MEC

Paula Pouso, Fac. de Medicina, Udelar – Instituto de Investigaciones Biológicas Clemente Estable, MEC

Laura Quintana, Instituto de Investigaciones Biológicas Clemente Estable, MEC

Lidia Szczupak, Universidad de Buenos Aires, Argentina

Daniel Tomsic, Universidad de Buenos Aires, Argentina

Lucía Zubizarreta, Fac. de Medicina, Udelar – Instituto de Investigaciones Biológicas Clemente Estable, MEC





# ABOUT US



## International Congress of Neuroethology 2016

[www.neuroethology.org](http://www.neuroethology.org)

### Program Committee

Chairs:           Martín Giurfa, Research Centre on Animal Cognition, France

                      José Luis Peña, Albert Einstein College of Medicine, USA

Heather Eisthen, Michigan State University, USA

Ichiro Fujita, University of Osaka, Japan

Jeremy Niven, University of Sussex, UK

Justin Marshall, University of Queensland, Australia

Carmen Sandi, EPFL, Switzerland

Lidia Szczupak, University of Buenos Aires, Argentina

Barbara Webb, University of Edinburgh, UK

Sarah Woolley, Columbia University, USA

INTERNATIONAL SOCIETY FOR NEUROETHOLOGY



FACULTAD DE  
CIENCIAS  
SOCIALES Y CIENCIAS EXACTAS



FACULTAD DE  
INGENIERÍA





# ICN 2016 SCHEDULE

## INTERNATIONAL SOCIETY FOR NEUROTHOLOGY

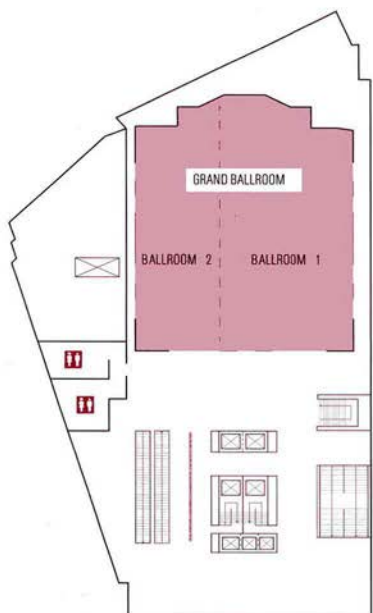
	MARCH 28-29	WEDNESDAY, MARCH 30	THURSDAY, MARCH 31
8:30 - 9:00			
9:00 - 10:00	SATELLITE WORKSHOPS	II MEETING NEUROETHOLOGY OF THE SOUTHERN CONE SYMPOSIUM I	JCPA PRESIDENTIAL SYMPOSIUM K. Catania, S. White
10:00 - 10:30			COFFEE BREAK
10:30 - 12:30		II MEETING NEUROETHOLOGY OF THE SOUTHERN CONE SYMPOSIUM II	JCPA PRESIDENTIAL SYMPOSIUM E. Mora, T. Olivera, D. Robert, T. Matsuzawa
12:30 - 14:00		LUNCH	LUNCH / ISN EXEC-COUNCIL MEETING
14:00 - 15:00		II MEETING NEUROETHOLOGY OF THE SOUTHERN CONE SYMPOSIUM III	PLENARY LECTURE 1 C. Rankin
15:00 - 17:30		II MEETING NEUROETHOLOGY OF THE SOUTHERN CONE SYMPOSIUM IV	POSTER SESSION I
17:30 - 18:00		OPENING CEREMONY I. Organizer Remarks II. Neuroethology: Tales from South America III. Reception	FRANZ HUBER LECTURE G. Robinson
18:00 - 19:00			
19:00 - 20:00			
20:00 - 21:00			
21:00 - 24:00			

FRIDAY, APRIL 01	SATURDAY, APRIL 02	SUNDAY, APRIL 03
	PLENARY LECTURE 4 D. Tomsic	PLENARY LECTURE 6 R. Benton
PLENARY LECTURE 2 A. Kepecs	COFFEE BREAK	COFFEE BREAK
CONCURRENT INVITED SYMPOSIA I. Behavioral and neural genomics of sociality II. Comparative view of the optic tectum: A glimpse into the evolution of goal-oriented behaviors and attention in vertebrates III. Sensorimotor integration in vocal production and learning in songbirds	CONCURRENT INVITED SYMPOSIA IV. Far from a 'feather brain': higher cognitive functions and their neural substrates in fish V. Neuroethology of parallel olfactory processing in insects and vertebrates VI. Mirror neurons in primates	CONCURRENT INVITED SYMPOSIA VII. Neuronal mechanisms underlying target detection VIII. The cognitive approach to behavior and its lessons for neuroscience IX. News on the sensory world of birds
LUNCH	LUNCH CAREER-DEVELOPMENT SESSIONS	LUNCH CAREER-DEVELOPMENT SESSIONS
PLENARY LECTURE 3 A. Dahanukar	PLENARY LECTURE 5 S. Herculano-Houzel	PLENARY LECTURE 7 A. Nieder
COFFEE BREAK		COFFEE BREAK
CONCURRENT PARTICIPANT SYMPOSIA Participant Symposium - A Participant Symposium - B Participant Symposium - C ISN/Neuro-Frames Symposium	POSTER SESSION II	CONCURRENT INVITED SYMPOSIA X. Neural mechanisms of spatial perception and navigation XI. Evolutionary mechanisms of sensory loss and regain XII. A brain within the brain: Sensory integration and network logic of the <i>Drosophila</i> circadian clock
COFFEE BREAK		COFFEE BREAK
YOUNG INVESTIGATOR AWARDS SYMPOSIUM A. Finkelstein, C. Stådele, A. Wallach, S. Wasserman	WALTER HEILIGENBERG LECTURE D. Angelaki	ISN BUSINESS MEETING
PHOTO EXHIBIT Stories of mind mysteries		Walk to banquet
STUDENT / POST-DOC MIXER		BANQUET

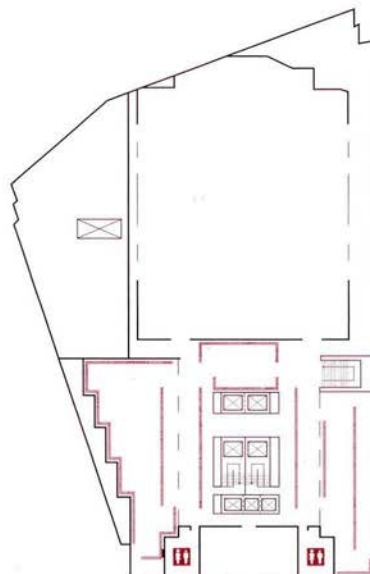


# CONVENTION CENTER INFORMATION

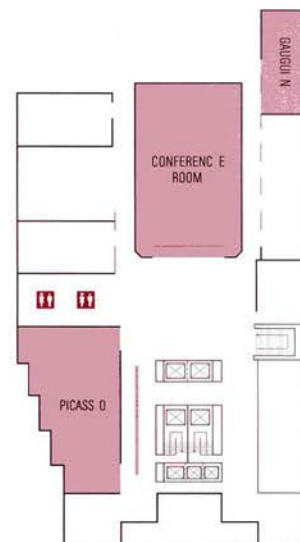
## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016



2nd FLOOR



3rd FLOOR



4th FLOOR

The Radisson Montevideo Victoria Plaza, conveniently situated in the city's main square, Plaza Independencia, making it easy to access local attractions, such as the historic Iglesia Matriz, the Museo del Gaucho y de la Moneda and the charming shops of Ciudad Vieja.

The 3-story Convention Center offers full-equipped meeting rooms and exhibition facilities as well as the on-site restaurant on the 25th floor, or the conveniently located Victoria Bistró with the drinks, snacks and international menu.

Address: Plaza Independencia 759 - Montevideo 11100 Uruguay

Phone: 2-902-0111

Website: <http://www.radisson.com>

# CITY MAP - MONTEVIDEO

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

**i** for music, sports, and restaurant tips,  
please check the leaflet inside the  
ICN2016 bag  
touristic information is available at  
the desk





# WELCOME MESSAGE

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

Dear ISNers and Honored Guests,

It is my great pleasure to welcome you all to the 2016 International Congress of Neuroethology (ICN2016) which is being held in the Radisson Montevideo Victoria Plaza Hotel in scenic downtown Montevideo from March 30-April 3, 2016.

The Program Committee- chaired by Jose Luis Peña and Martin Giurfa- has done an outstanding job to ensure that the science being presented is first-class, and that program is truly international and enlightening. Moreover, the Local Organizing Committee- chaired by the indefatigable Ana Silva- has worked diligently to ensure that the meeting runs smoothly, with ample opportunity for scientific and personal interaction, while emphasizing the uniquely Latin flavor of our first ICN in the South American continent.

I recognize that many of us have had to travel long distances to attend this Congress. But from my own experience, I can truly say that every trip I have made to Uruguay has been highly memorable, scientifically rewarding, and infused with the natural warmth of the people who live in this unique country.

I cordially invite you to fully participate in all aspects of the Congress and to enjoy your stay in Montevideo, ranked by the 2015 Mercer Quality of Living Survey as #1 in Latin America.

¡Espero que lo pasen bárbaro!

Peter Narins  
President, ISN

### EXECUTIVE COUNCIL

#### President

Peter M. Narins, University of California Los Angeles, USA

#### President-Elect

Catharine Rankin, University of British Columbia, Canada

#### Past President

Alison Mercer, University of Otago, New Zealand  
Treasurer

Karen Mesce, University of Minnesota, USA  
Secretary

Susan E. Fahrbach, Wake Forest University, USA

# PROGRAM COMMITTEE

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## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

Dear Attendees

It is our special pleasure to welcome you to the 12th International Congress of Neuroethology in Montevideo, Uruguay. We have scheduled nine cutting-edge plenary lectures, twelve exciting symposia, three carefully-selected participant symposia, five career development sessions and two poster sessions that we hope you will enjoy.

Such rich and exciting program would not have been possible without your collaboration. We want, therefore, to thank all the speakers, symposium chairs and poster presenters that will contribute to the excellence of this event.

This ICN has a unique, historical importance for being the first time in over three decades since the inception of the conference that it takes place in South America. We see this as a signal of growth and vitality that will benefit the ISN in years to come.

Though living in France and the United States our South American roots make both of us particularly honored and touched welcoming you to the ICN2016 in Montevideo.

We wish you an inspiring and memorable experience at ICN2016.

Martín Giurfa, CNRS – University of Toulouse

José Luis Peña, Albert Einstein College of Medicine, USA

### PROGRAM COMMITTEE

**Martín Giurfa - Co-Chair -**

CNRS -University of Toulouse, France

**José Luis Peña - Co-Chair -**

Albert Einstein College of Medicine, USA

**Heather Eisthen**

Michigan State University, USA

**Ichiro Fujita**

University of Osaka, Japan

**Jeremy Niven**

University of Sussex, UK

**Justin Marshall**

University of Queensland, Australia

**Carmen Sandi**

Ecole Polytechnique Federale de Lausanne,  
Switzerland

**Lidia Szczupak**

University of Buenos Aires, Argentina

**Barbara Webb**

University of Edinburgh, UK

**Sarah Woolley**

Columbia University, USA



# LOCAL ORGANIZING COMMITTEE

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

Dear ICN2016 attendees,

On behalf of the Local Organizing Committee, it is my great pleasure to welcome you all to the 12th edition of the International Congress of Neuroethology. It has been a fruitful 30-year journey for Neuroethology, since the first congress of our Society took place in Tokyo, in 1986. Carrying on the foundational principles of our Society was at the center of our mission, honored and excited to host the first meeting of the International Society for Neuroethology in Latin America.

We aimed to promote diversity in its broadest sense, guided by the firm belief that diversity is fundamental to our Society. Though traveling to Montevideo may seem a long journey to some attendees, we are proud and thankful to the nearly 500 participants from 32 countries attending the ICN2016. The changing destination of Neuroethology meetings makes sense in a double positive loop: it allows underrepresented groups to attend the ICN and it benefits our Society with the special flavor that each host may impinge to the global ICN. It is encouraging to see that 30% of ICN2016 attendees belong to Latin American countries, and that most of them are attending the meeting for the first time.

The ICN2016 is the largest and most important basic Neuroscience meeting ever held in Uruguay and its organization has strongly impacted on our neuroscience community. We deeply thank all our local, regional and international sponsors that made possible the ICN2016.

I would finally like to welcome you to Montevideo, this endearing South American capital city facing Río de la Plata with a blend of European and Latin American flavors. I trust you will have the chance to discover its magic corners as well as the warmth of its people.

One more thing: Thank you so very much for being here!!

All my best,

Ana Silva, Chair, Local Organizing Committee

## LOCAL ORGANIZING COMMITTEE

Ana Silva - Chair - Universidad de la República-Ministerio de Educación y Cultura, Uruguay

Jose Alves-Gomes - Instituto Nacional Pesquisas da Amazônia, Brazil

Angel Caputi - Ministerio de Educación y Cultura, Uruguay

Annabel Ferreira - Universidad de la República, Uruguay

Leonel Gómez - Universidad de la República, Uruguay

Andrés González - Universidad de la República, Uruguay

Omar Macadar - Universidad de la República-Ministerio de Educación y Cultura, Uruguay

Javier Nogueira - Universidad de la República, Uruguay

Mario Penna - Universidad de Chile, Chile

Rossana Perrone - Ministerio de Educación y Cultura, Uruguay

Laura Quintana - Ministerio de Educación y Cultura, Uruguay

Lidia Szczupak - Universidad Buenos Aires, Argentina

Daniel Tomsic - Universidad Buenos Aires, Argentina

Gervasio Batista - PhD student - Albert Einstein College of Medicine, USA

Adriana Migliaro - PhD student - Universidad de la República-Ministerio de Educación y Cultura, Uruguay

Paula Pouso - PhD student - Universidad de la República-Ministerio de Educación y Cultura, Uruguay

Lucía Zubizarreta - PhD student - Universidad de la República-Ministerio de Educación y Cultura, Uruguay



# GENERAL INFORMATION

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

### 1 RECEPTION DESK

The reception desk will open 9:00 – 19:00 on Wednesday, March 30 through Sunday April 3. All the attendees are expected to go to the reception desk to pick-up name tags and ICN2016 bag. On-site registration is also available at the desk.

### 2 PRESENTATIONS

#### **Oral sessions**

Lectures and symposia will be held in rooms 1, 2 (Ballroom, 2nd Floor), in the Conference Room (4th Floor), and in the Picasso room (4th Floor), each equipped with a high power DLP projector. We will have a PC reception desk at the convention center to facilitate projection tests in advance. Speakers will be advised to go to the PC reception desk well before the session starts to upload their presentations to the system. Assistance for projector connections and sound amplification will be provided. Only plenary lecturers may use their own computers (Windows or Mac). Mac users are advised to provide their own connection cable.

#### **Poster sessions**

The 2nd, 3rd and 4th Floor facilities will be open for poster presentations throughout the congress, and each presenter will have a one-hour time slot allocated for his/her presentation during the 4-hour poster session (15:00-19:00). Posters scheduled for session 1 (Thu-Fri) should be hung in the morning (from 08:30 Thu) and should be removed by the evening of the next day (before 19:30 Fri). Posters scheduled for session 2 (Sat-Sun) should be hung in the morning (from 08:30 Sat) and should be removed by the evening of the next day (before 17:00 Sun). A wide poster board space (150 cm wide × 120 cm height) will be prepared for each poster. U-tac and adhesive tape will be provided. No electric sockets will be available near the poster boards.

### 3 OPENING CEREMONY & WELCOME PARTY

The opening ceremony will start at 17:30 on Wednesday March 30 followed by the welcome party at the Ballroom (2nd Floor).

### 4 BANQUET

On April 03, after the business meeting (20:00), a short walk (5 min) will take participants from the ICN2016 venue to the banquet at Club Uruguay.

Address: Peatonal Sarandí 584

# SOCIAL - CULTURAL ACTIVITIES

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

MARCH  
30

### WELCOME PARTY

At the opening session of ICN2016 at the Radisson Montevideo Victoria Plaza Hotel (Ballroom), highly qualified musicians and performers will welcome congress attendees with a Latin American ambiance amidst the harmonies of Tango.

The visceral resonance of the bandoneón -the iconic instrument for this music genre-, merging with original simple yet poetic lyrics and complementary scripts, will serve to introduce the audience to the spirit and circumstances of the Rio de la Plata Region and its inhabitants. Conceivably, the show will convey cues of how different or similar the human condition of local neuroethologists might be, from that of their foreign visiting counterparts.

Invited artists: Mario Penna & band

Time: 19:00

Place: Radisson Montevideo Victoria Plaza (Ballroom)

HOURS  
24

### ART EXPOSITION COLECTIVONEGROS

ColectivoNegros is a multidisciplinary group that uses diverse media for art installations. Their creative process starts with research and reflection on specific topics, to generate pieces where poetry, social issues and humor are combined. For this special occasion, the group will visit "The world of Neuroethology"

Date/Time: During the congress

Place: Radisson Montevideo Victoria Plaza (Hallways)

APRIL  
01

### OUTDOOR PHOTO GALLERY "A CIELO ABIERTO"

The Photo exhibition "Stories of mind mysteries" will be held in the outdoor gallery: "A cielo abierto" ("Under the open sky"). This open gallery belongs to the Centro de Fotografía de Montevideo and is located at a charming corner of Ciudad Vieja (<http://cdf.montevideo.gub.uy/>)

Date: Opening April 01 - 20:00 through Jun 01

Time: 24 hours

Place: Piedras Street, across from the Plaza of the "Museo del Carnaval"

### STUDENT/POST DOC MIXER

Date: April 01

Time: 21:00

Place: Complejo Cultural Platea Sur, Bartolomé Mitre 1472



# III LATIN AMERICAN SCHOOL OF NEUROETHOLOGY

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

MARCH 20 – APRIL 3

### III LATIN AMERICAN SCHOOL OF NEUROETHOLOGY

The III Latin American School of Neuroethology is a bi-national initiative (Argentinian and Uruguayan) aimed to promote Neuroethology in South America, and to train Latin American graduate students in cutting-edge topics and approaches of this discipline. It is conceived as an associated event to the XII International Congress of Neuroethology that, for the first time in 30 years, will be held in the Southern Hemisphere, in South America.

The School is organized in two modules held in Buenos Aires (first week, MARCH 20 – MARCH 26) and Montevideo (second week, MARCH 26 – APRIL 3).

ORGANIZERS **Lidia Szczupak**, Universidad de Buenos Aires, Argentina

**Daniel Tomsic**, Universidad de Buenos Aires, Argentina

ASSISTANT ORGANIZERS:

**Adriana Migliaro**, Universidad de la República – Ministerio de Educación y Cultura, Uruguay

**Lucía Zubizarreta**, Universidad de la República – Ministerio de Educación y Cultura, Uruguay

COORDINATION:

First week: **Lidia Szczupak**, Univ. de Buenos Aires, Argentina / **Daniel Tomsic**, Univ. de Buenos Aires, Argentina

Second week: **Kent Dunlap**, Trinity College, USA / **Ana Silva**, Universidad de la República – Ministerio de Educación y Cultura, Uruguay

FACULTY **Ana Amador**, Universidad de Buenos Aires, Argentina

**Fernanda Ceriani**, Instituto Leloir, Argentina

**Kent Dunlap**, Trinity College, USA

**Martin Giurfa**, CNRS -University of Toulouse, France

**Jan Hemmi**, University of Western Australia, Australia

**Kim Hoke**, Colorado State University, USA

**John Lewis**, University of Ottawa, Canada

**Fernando Locatelli**, Universidad de Buenos Aires, Argentina

**Gabriel Mindlin**, Universidad de Buenos Aires, Argentina

**Emanuel Mora**, Universidad de la Habana, Cuba

**Lauren O'Connell**, Harvard University, USA

**Jose Luis Pena**, Albert Einstein College of Medicine, USA

**Ana Silva**, Universidad de la República – Ministerio de Educación y Cultura, Uruguay

**Lidia Szczupak**, Universidad de Buenos Aires, Argentina

**Daniel Tomsic**, Universidad de Buenos Aires, Argentina

SELECTED  
STUDENTS

Iván Camilo Beltrán Arévalo, Colombia  
Agustina Cano, Argentina  
Susana Delgado Ocaña, Cuba  
Dardo Ferreiro, Brazil  
Dennis Francos, Cuba  
Marina Galleazzo Martins, Brazil  
Linda Carolina Hernández Duran, Colombia  
Estela Manuela Lanza, Argentina  
Matías Muñoz, Chile  
Melissa Pavez, Chile  
Lizeth Pedraza, Colombia  
Sofía Polcowñuk, Argentina  
Mauro Federico Ramírez, Brazil  
Guillermo Reherrmann del Río, Uruguay  
Federico Reyes Blengini, Uruguay  
Juan Esteban Salazar, Chile  
Rodrigo Alejandro Sierra Ordoñez, Brazil

MARCH  
20/26

Theoretical classes and practical demonstrations, Facultad de Ciencias Exactas y Naturales, UBA, Buenos Aires

MARCH  
27

Field trip and field work on the classical South American neuroethology models, weakly electric fish and crab. Departamento de Maldonado, Uruguay.

MARCH  
28

Workshop on Bioengineering. Facultad de Ciencias, Montevideo.

MARCH  
28/29

Satellite Meetings

MARCH  
30

II Meeting on Neuroethology of the Southern Cone

MARCH  
30/4  
APRIL

XII International Congress of Neuroethology. Student's poster presentation at the poster sessions of the XII International Congress of Neuroethology

APRIL  
2

News&Views style essay's writing and discussion on one recent article authored by investigators assisting to the XII International Congress of Neuroethology.

"Meet the experts" session within the XII International Congress of Neuroethology where students discuss the News&Views articles (Introduced by William Kristan). Sala Gauguin, Radisson Victoria Plaza, Montevideo



# PROGRAM SATELLITE ACTIVITIES

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

**MARCH 28 - 29**

**09:00 - 20:00 SATELLITE WORKSHOPS**

### **ELECTRIC FISH**

A workshop covering the subjects of electrosensory and electromotor systems, as well as communication, cognition, navigation, neuroendocrinology, development and evolution of the nervous system of electroreceptive animals.

Organizing Committee:

Angel Caputi (coordinator, IIBCE, Uruguay), María Castelló (IIBCE, Uruguay), Len Maler (University of Ottawa, Canada), Laura Quintana (IIBCE, Uruguay),

Gerhard von der Emde (University of Bonn, Germany)

Venue: Instituto de Investigaciones Biológicas Clemente Estable

Address: Av. Italia 3318

**MARCH 29**

**09:00 - 20:00 SATELLITE WORKSHOPS**

### **AMPHIBIAN BRAINS, BEHAVIOR, AND EVOLUTION**

A meeting centered on the neurobiological basis of amphibian behavior, including motor pattern generation, prey capture, spinal cord regeneration, acoustic communication, parental care, and reproductive behavior.

Organizing Committee:

Kim Hoke (Coordinator and Contact Person, Colorado State University, USA), Lauren O'Connell (Harvard University, USA), Erik Zornik (Reed College, USA), Ian Hall (Columbia University, USA)

Venue: Presidencia de la República

Address: Plaza Independencia 700

### **AUDITORY PROCESSING, SOUND PRODUCTION AND MOTOR CONTROL**

A meeting to discuss how the central nervous system integrates auditory and motor information to enable communication, including auditory perception, sound production, motor and neural coding in a variety of model systems.

Organizing Committee:

Ana Amador (Coordinator and Contact Person, Universidad de Buenos Aires, Argentina), Sarah Bottjer (University of Southern California, USA), Frederick Theunissen (University of California at Berkeley, USA), Daniel Margoliash (University of Chicago, USA), Claudio Mello (Oregon Health and Science University, USA), Coen Elemans (University of Southern Denmark, Denmark)

Venue: Museo Torres de la Llosa

Address: Eduardo Acevedo 1427

### NEUROETHOLOGY OF DISEASE VECTOR INSECTS

A workshop focused on sensory and behavioral adaptations of insects that feed on vertebrate blood, including recent findings on the molecular and sensory bases of perception, cognitive abilities, and mechanisms behind behavioral manipulation by parasites.

Organizing Committee:

Claudio R. Lazzari (University of Tours, France), Marcelo G. Lorenzo (FIOCRUZ, Brazil)

Venue: Facultad de Química - Universidad de la República

Address: Gral. Flores 2124

### NEURAL AND BEHAVIORAL PLASTICITY IN SOCIAL INSECTS

A symposium to explore how experience in a broad sense can modulate behavior in diverse social insect species, and how this can be implemented at the neural level.

Organizing Committee:

Jean-Marc Devaud (Université Toulouse III – Paul Sabatier, France), Walter Farina (Universidad de Buenos Aires, Argentina)

Venue: Facultad de Química - Universidad de la República

Address: Gral. Flores 2124

### VISION WITH FEW PHOTONS: RETINAL ADAPTATIONS AND BEHAVIOURAL STRATEGIES IN NOCTURNAL VERTEBRATES

A meeting focused on visual sensitivity and the adaptations that allow animals to use vision in dim light, inspired by the need of enhancing the communication between neurobiologists working on dim light vision with ethologists working on various animal groups.

Organizing Committee:

Almut Kelber, Carola Yovanovich (Lund University, Sweden)

Venue: Centro de Formación de la Cooperación Española

Address: 25 de Mayo 520



# PROGRAM

## II MEETING OF NEUROETHOLOGY OF THE SOUTHERN CONE

### MARCH 30

08:30 - 08:50 **REGISTRATION II MEETING NEUROETHOLOGY OF THE SOUTHERN CONE-MONTEVIDEO, URUGUAY**

Venue: Radisson Montevideo Victoria Plaza Hotel  
Conference Room (4th Floor)

08:50 - 09:00 Welcome words

09:00 - 10:45 **SYMPOSIUM I**

**Detection and orientation to the earth's magnetic field by the nematode *C. elegans***

Dr. Andrés Vidal-Gadea, Molecular Neuroethology Lab, School of Biological Sciences, Illinois State University, USA

**Listening to a bird's dream**

Dr. Gabriel Mindlin, Laboratorio de Sistemas Dinámicos, Departamento de Física, Universidad de Buenos Aires, Argentina

**Behavioral changes in triatomines infected with trypanosomes influence parasite transmission**

Dra. Alessandra Guarneri, Centro de Pesquisas René Rachou – Fiocruz, Brazil

**Deep-time epigenesis of neocortical circuits (or how to make a mammalian brain)**

Dr. Rodrigo Suárez, Queensland Brain Institute, The University of Queensland, Australia

10:45 - 11:15 Coffee break

11:15 - 12:30 **SYMPOSIUM II**

**Neuroendocrine regulation of social and reproductive behavior in a cichlid fish**

Dr. Matías Pandolfi, Laboratorio de Neuroendocrinología y Comportamiento, Departamento de Biodiversidad y Biología Experimental, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina

***Octodon degus*, a new model species for basic and applied neuroethology?**

Dr. Rodrigo Vázquez, Instituto de Ecología y Biodiversidad, Departamento de Ciencias Ecológicas, Facultad de Ciencias, Universidad de Chile, Chile

**Emergence of feature selectivity in the visual wulst of owls**

Dr. Jerome Baron, Departamento de Fisiologia e Biofisica, Instituto de Ciencias Biológicas, Universidade Federal de Minas Gerais, Brazil

12:30 - 14:00 Lunch

14:00 - 15:15 **SYMPOSIUM III**

**Sexual behavior of the female rat at different life time periods**

Dra. Daniella Agrati, Sección Fisiología y Nutrición, Facultad de Ciencias, Universidad de la República, Uruguay

**From crabs to humans: thirst and stress unveil unexpressed memories**

Dr. Alejandro Delorenzi, Laboratorio de Neurobiología de la Memoria, Instituto de Fisiología y Biología Molecular, Universidad de Buenos Aires, Argentina

**Tool use and behavioral traditions in tufted capuchin monkeys (*Sapajus* spp.)**

Dr. Eduardo Benedicto Ottoni, Instituto de Psicologia, Departamento de Psicologia Experimental, Universidade de São Paulo, Brazil

15:15 - 15:45 Coffee break

**15:45 - 17:00 SYMPOSIUM IV**

**Where are located the cognitive skills of birds?**

Dr. Patricio Ahumada, Laboratorio de estudios ontogenéticos, Facultad de Medicina, Universidad de Chile, Chile

**Motivation is everything: endogenous modulation and plasticity of the response to host signals in disease vector insects**

Dr. Claudio Lazzari, Institut de Recherche sur la Biologie de l'Insecte, Univ. François Rabelais, Faculté des Sciences et Techniques, France

**Estrogens, brain and behavior: a new look at non-breeding aggression in fish**

Dra. Laura Quintana, Unidad Bases Neurales de la Conducta, Instituto de Investigaciones Biológicas Clemente Estable, Uruguay

17:00 - 17:10 Closing remarks



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

### MARCH 30

17:30 - 22:00

#### OPENING CEREMONY

Grand Ballroom (2nd Floor)

##### Welcome Speeches

Ana Silva, Local Organizing Committee, Chair

Martín Giurfa and José Luis Peña, Program Committee, Co-Chairs

Peter Narins, International Society for Neuroethology, President

Roberto Markarián, Universidad de la República, Chancellor

María Muñoz, Ministerio de Educación y Cultura, Minister

##### Neuroethology: Tales from South America

Chairs: Angel Caputi and Leonel Gómez

Documentary of the history of Neuroethology and its model systems in South America

Homage to mentors of South American Neuroethology

##### The Potential and Promise of Neuroethology for Latin America: A View from the North

John Hildebrand, University of Arizona, USA

##### Welcome to the Far South

Omar Macadar, Universidad de la República-Ministerio de Educación y Cultura, Uruguay

##### Welcome Party

Tango concert by Mario Penna & his band

### MARCH 31

09:00 - 10:00

#### JCPA PRESIDENTIAL SYMPOSIUM

Grand Ballroom (2nd Floor)

*Chair: Peter Narins, University of California Los Angeles, USA / President of the International Society for Neuroethology*

09:00

##### The shocking predatory strike of the electric eel

Kenneth Catania, Vanderbilt University, USA

09:30

##### Cycling in the brain: Molecular microcircuits for learned vocalization

Stephanie White, University of California Los Angeles, USA

10:00 - 10:30

Coffee break

- 10:30 - 12:30 **JCPA PRESIDENTIAL SYMPOSIUM**  
Grand Ballroom (2nd Floor)  
*Chair: Peter Narins, University of California, Los Angeles, USA*
- 10:30 **Bat echolocation vs. moth hearing: evolution of tactics and countertactics**  
Emanuel Mora, University of Havana, Cuba
- 11:00 **Biodiversity of fish-hunting cone snails: correlating genetics and pharmacology to behavior**  
Baldomero Olivera, University of Utah, USA
- 11:30 **Detection of floral electrostatic fields by bumblebees**  
Daniel Robert, Bristol University, UK
- 12:00 **The evolutionary origins of human cognitive development: insights from research on chimpanzees**  
Tetsuro Matsuzawa, Kyoto University, Japan
- 12:30 - 14:00 **Lunch / ISN EXEC-COUNCIL MEETING**  
Gauguin Room (4th Floor)  
ISN Executive and Council Meeting
- 14:00 - 15:00 **PLENARY LECTURE 1**  
Grand Ballroom (2nd Floor)  
*Presenter: Peter Narins, University of California Los Angeles, USA*  
  
Catharine Rankin, University of British Columbia, Canada  
**Response based analyses of behavior overlook other important behavioral changes: integrating habituation into ongoing behavior**
- 15:00 - 19:00 **POSTER SESSION I**  
Hallways (2nd, 3rd and 4th Floor)  
See pages 30 to 41 for detailed Poster Session I Program
- 19:00 - 20:00 **FRANZ HUBER LECTURE**  
Grand Ballroom (2nd Floor)  
*Presenter: Andrew Barron, Macquarie University, Australia*  
  
Gene Robinson, University of Illinois, USA  
**Understanding the relationship between genes and social behavior: lessons from the honey bee**



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

### APRIL 01

09:00 - 10:00

#### PLENARY LECTURE 2

Grand Ballroom 1 (2nd Floor)

*Presenter: Kenta Asahina, Salk Institute for Biological Studies, USA*

Adam Kepecs, Cold Spring Harbor Laboratory, USA  
Confidence in rats, humans, and mathematics

10:00 - 10:30

Coffee break

10:30 - 12:30

#### CONCURRENT INVITED SYMPOSIA

##### I. BEHAVIORAL AND NEURAL GENOMICS OF SOCIALITY

Grand Ballroom 1 (2nd Floor)

*Chair: Rui F. Oliveira, Gulbenkian Institute of Science, Portugal*

10:35

Deep homology in the neuromolecular mechanisms underlying vertebrate social behavior  
Hans Hofmann, University of Texas at Austin, USA

11:05

Gene-function analyses of molecular networks relevant for learned behaviors in birds and fruit-flies  
Constance Scharff, Universitat Berlin, Germany

11:35

Communication networks in zebrafish: neuromolecular mechanisms and cognitive abilities for social communication  
Rui F. Oliveira, Gulbenkian Institute of Science, Portugal

12:05

Ancestral imprints on descendant nervous systems  
Brian Dias, Emory University, USA

##### II. COMPARATIVE VIEW OF THE OPTIC TECTUM: A GLIMPSE INTO THE EVOLUTION OF GOAL-ORIENTED BEHAVIORS AND ATTENTION IN VERTEBRATES

Grand Ballroom 2 (2nd Floor)

*Chairs: Germán Sumbre, Ecole Normale Supérieure, France and Yoram Gutfreund, Technion - Israel Institute of Technology, Israel*

10:35

Function and development of the optic tectum circuitry in the zebrafish larva  
Germán Sumbre, Ecole Normale Supérieure, France

11:05

Saliency map in the archer fish optic tectum  
Ronen Segev, Ben-Gurion University, Israel

11:35

Circuits and computations underlying stimulus selection in the owl midbrain  
Shreesh Mysore, John-Hopkins University, USA

- 12:05      **The central role of the primate superior colliculus in coding saliency, priority, and orienting**  
Douglas Munoz, Queens's University, Canada

### III. SENSORIMOTOR INTEGRATION IN VOCAL PRODUCTION AND LEARNING IN SONGBIRDS

*IN MEMORIAM: ALLISON DOUPE*

Conference Room (4th Floor)

*Chair: Ana Amador, University of Buenos Aires, Buenos Aires, Argentina*

- 10:35      **Universal mechanisms of sound production and control in birds and mammals**  
Coen P.H. Elemans, University of Southern Denmark, Denmark
- 11:05      **Variability in action: basal ganglia-forebrain circuits in vocal learning and plasticity**  
Mimi H. Kao, Tufts University, USA
- 11:35      **Hormone-dependent vocal communication in songbirds**  
Manfred Gahr, Max Planck Inst. for Ornithology, Seewiesen, Germany
- 12:05      **Biomechanical models to study the neural bases of birdsong production**  
Ana Amador, University of Buenos Aires, Argentina

12:30 - 14:00      Lunch

### 14:00 - 15:00      **PLENARY LECTURE 3**

Grand Ballroom 1 (2nd Floor)

*Chair: Silke Sachse, Max Planck Institute, Germany*

Anupama Dahanukar, UC Riverside, USA

**The hungry fly: Taste receptors, circuits and the control of feeding behavior**

15:00 - 15:30      Coffee break

### 15:30 - 17:30      **CONCURRENT PARTICIPANT SYMPOSIA**

#### **PARTICIPANT SYMPOSIUM - A**

Grand Ballroom 1 (2nd Floor)

*Chair: Catharine Rankin, University of British Columbia, Canada*

- 15:30      **Honeybee interneurons responsive to the pulsed vibration produced by waggle dance**  
Hiroyuki Ai, Fukuoka University, Japan
- 15:50      **Genetic and neural mechanisms governing the sexual dimorphism of agonistic behavior in *Drosophila melanogaster***  
Kenta Asahina, Salk Institute for Biological Studies, USA



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

- 16:10 Do motor neurons regulate premotor vocal rhythms?  
Erik Zornik, Reed College, USA
- 16:30 Neuronal activation in the preoptic area during agonistic behavior in the weakly electric fish, *Gymnotus omarorum*  
Paula Pouso, Universidad de la República - Ministerio de Educación y Cultura, Uruguay
- 16:50 Representation of conspecifics by bat hippocampal place cells  
David Omer, Weizmann Institute of Science, Israel
- 17:10 Sensory adaptation to the social environment through spike-timing-dependent plasticity in mormyrid electric fish  
Bruce Carlson, Washington University St. Louis, USA

### PARTICIPANT SYMPOSIUM - B

Grand Ballroom 2 (2nd Floor)

Chair: Paul Katz, Georgia State University, USA

- 15:30 Homing in desert dung beetles - an accurate navigation system without landmarks  
Jochen Smolka, Lund University, Sweden
- 15:50 A novel motion-sensitive pathway connecting the optic lobes and the central complex of a nocturnal bee  
Anna Honkanen, Lund University, Sweden
- 16:10 The circuit basis ON directional selectivity in the *Drosophila* visual system  
Michael Reiser, Janelia Farm Research Campus, USA
- 16:30 Distributed neural prediction in amphibian prey capture  
William Mowrey, Janelia Farm Research Campus, USA
- 16:50 Multi-modal and multi-dimensional sensory perception in bats  
Alexandra Danilovich, Tel Aviv University, Israel
- 17:10 Visual cortex responses of cats and agoutis: an electrophysiological comparison  
Dardo Ferreiro, Federal University of Rio Grande do Norte, Brazil

### PARTICIPANT SYMPOSIUM - C

Picasso Room (4th Floor)

Chair: Alison Mercer, University of Otago, New Zealand

- 15:30 Molecular basis of mechanosensation in tactile-foraging ducks  
Eve Schneider, Yale University, USA

- 15:50      **Using multiple source of information to visualize structure in behavioral data**  
Roian Egnor, Janelia Farm Research Campus, USA
- 16:10      **Circuitry of sensory representation in mushroom body calyx of *Drosophila* larva**  
Liria Masuda Nakagawa, University of Cambridge, UK
- 16:30      **Neurochemical underpinnings of morphine addiction in ants**  
Mark Seid, University of Scranton, USA
- 16:50      **Persistent activation of nitric oxide synthase (NOS) is involved in a novel "molecular long-term memory switch" in the vertical lobe of the octopus**  
Ana Turchetti-Maia, Hebrew University, Israel
- 17:10      **Towards the connectome of *Octopus vulgaris*: how an advanced invertebrate neural-circuit supports behavioral and biological plasticity**  
Graziano Fiorito, Stazione Zoologica Anton Dohrn, Italy

#### ISN/NEURO-FRAMES SYMPOSIUM

Conference Room (4th Floor)

Chair: Angel Caputi, Ministerio de Educación y Cultura, Uruguay

- 15:45      **Arthropod's peripheral visual neurons shape behavioral responses to object motion stimuli**  
Martin Berón de Astrada, Universidad de Buenos Aires, Argentina
- 16:05      **A radial map of selectivity to multi-whisker correlation in the rat barrel cortex**  
Laurent Bourdieu, Ecole Normale Supérieure, Paris, France
- 16:25      **Pheromones as modulators of insect behavior**  
Nina Deisig, Institut d'Ecologie et des Sciences de l'Environnement de Paris, France
- 16:45      **Early processing of electrosensory images in pulse gymnotiformes**  
Angel Caputi, Instituto de Investigaciones Biológicas Clemente Estable, Uruguay
- 17:05      **Shape recognition based on artificial electric sense for underwater robotics**  
Frederic Boyer, Ecole des Mines de Nantes, France

17:30 - 18:00      Coffee break

#### 18:00 - 20:00      YOUNG INVESTIGATORS AWARD SYMPOSIUM

Grand Ballroom 1 (2nd Floor)

Chair: Ari Berkowitz, University of Oklahoma, USA

- 18:00      **Optimal coding by mixed-dimensionality neurons across behavioral modes: insights from head-direction cells in bats**  
Arseny Finkelstein, Weizmann Institute of Science, Israel



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

- 18:30      **Neuromodulators stabilize neural network function over a broad temperature range**  
Carola Städele, Illinois State University, USA
- 19:00      **Representation of whisker self-motion in the early stages of the vibrissal system**  
Avner Wallach, University of Ottawa, Canada
- 19:30      **Multimodal sensory integration underlying decision-making in flying *Drosophila***  
Dr. Sara Wasserman, University of California, Los Angeles, USA
- 20:00 -21:00      **PHOTO EXHIBIT**  
Piedras Street, across from the Plaza of the "Museo del Carnaval"
- The Photo exhibition "Stories of mind mysteries" will be held in the outdoor gallery:  
"A cielo abierto" ("Under the open sky"). This open gallery belongs to the Centro de Fotografía de Montevideo and is located in a charming corner of Ciudad Vieja
- 21:00 -24:00      **STUDENT / POST-DOC MIXER**  
Complejo Cultural Platea Sur  
Address: Bartolomé Mitre 1472

### APRIL 02

- 8:30 - 9:30      **PLENARY LECTURE 4**  
Grand Ballroom 1 (2nd Floor)  
*Presenter: Laura Quintana, Ministerio de Educación y Cultura, Uruguay*
- Daniel Tomsic, University of Buenos Aires, Argentina  
**Neurobiology of visually guided prey and predator behaviors in crabs**
- 9:30 - 10:00      Coffee break
- 10:00 - 12:00      **CONCURRENT INVITED SYMPOSIA**
- IV. FAR FROM A 'FEATHER BRAIN': HIGHER COGNITIVE FUNCTIONS AND THEIR NEURAL SUBSTRATES IN FISH**  
Grand Ballroom 1 (2nd Floor)  
*Chair: Leonard Maler, University of Ottawa, Canada*
- 10:05      **Not the ABC, but the IEGs of fish learning - indication for an involvement of the telencephalon in selected cognitive tasks**  
Theodora Fuss, University of Bonn, Germany

- 10:35      **Organization of the telencephalon of weakly electric gymnotiform fish: the neural bases of spatial learning**  
Leonard Maler, University of Ottawa, Canada
- 11:05      **Combination of cognitive skills in archerfish**  
Stefan Schuster, University of Bayreuth, Germany
- 11:35      **Conserved function of the corticobasal ganglia circuits in the zebrafish decision-making**  
Merlin Lange, RIKEN, Japan

#### V. NEUROETHOLOGY OF PARALLEL OLFACTORY PROCESSING IN INSECTS AND VERTEBRATES

Grand Ballroom 2 (2nd Floor)

*Chairs: Jean-Christophe Sandoz, National Centre for Scientific Research, France and Wolfgang Rössler, University of Würzburg, Germany*

- 10:05      **Neural circuits underlying odor valence and intensity perception in *Drosophila***  
Silke Sachse, Max Planck Institute, Germany
- 10:35      **Plasticity in the mouse olfactory bulb following motherhood**  
Adi Mizrahi, Hebrew University, Israel
- 11:05      **Parallel processing of odor information in honeybees**  
Martin F. Brill, CSHL, USA
- 11:35      **Parallel processing of sulfated steroid odorants in the dual olfactory system of an anuran amphibian**  
Ivan Manzini, University of Göttingen, Germany

#### VI. MIRROR NEURONS IN PRIMATES

Conference Room (4th Floor)

*Chair: Pier Francesco Ferrari, University of Parma, Italy*

- 10:15      **Mirror neurons in macaque monkeys. From basic mechanism to the extended network**  
Pier Francesco Ferrari, University of Parma, Italy
- 10:50      **Action execution and observation in the chimpanzee brain**  
Erin Hecht, Emory University, USA
- 11:25      **Single-cell level, mirror neurons in marmosets frontal cortex and neuroanatomy**  
Noritaka Ichinohe, National Institute of Neuroscience Tokyo, Japan



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

12:00 - 14:00 Lunch / CAREER-DEVELOPMENT SESSIONS

Picasso Room (4th Floor)

### Finding the right postdoctoral position

*Mentors: Susan Fahrbach, Wake Forest University, USA; Manfred Gahr, Max Planck Institute for Ornithology, Germany; Paul Katz, Georgia State University, USA; Justin Marshall, University of Queensland, Australia; Eric Warrant, Lund University, Sweden*

### Writing grant and fellowship applications

*Mentors: Karen Mesce, University of Minnesota, USA; Cindy Moss, Johns Hopkins University, USA; José Luis Peña, Albert Einstein College of Medicine, USA; Catharine Rankin, University of British Columbia, Canada; Harold Zakon, University of Texas, USA*

14:00 - 15:00 **PLENARY LECTURE 5**

Grand Ballroom 1 (2nd Floor)

*Presenter: Daphne Soares, University of Maryland, USA*

Suzana Herculano-Houzel, Universidade Federal do Rio de Janeiro, Brazil

**Brain diversity in evolution: what changes, what doesn't - and what does it matter?**

15:00 - 19:00 **POSTER SESSION II**

Hallways (2nd, 3rd and 4th Floor)

See pages 42 to 53 for detailed Poster Session II Program

19:00 - 20:00 **THE WALTER HEILIGENBERG LECTURE**

Grand Ballroom 1 (2nd Floor)

*Presenter: José Luis Peña, Albert Einstein College of Medicine, USA*

Dora Angelaki, Baylor College of Medicine, USA

**Merging of our senses: Building blocks and canonical computations**

**APRIL 03**

09:00 - 10:00 **PLENARY LECTURE 6**

Grand Ballroom 1 (2nd Floor)

*Presenter: Jean Christophe Sandoz, French National Centre for Scientific Research, France*

Richard Benton, University of Lausanne, Switzerland

**Evolution of olfactory circuits**

10:00 - 10:30 Coffee break

10:30 - 12:30 CONCURRENT INVITED SYMPOSIA

VII. NEURONAL MECHANISMS UNDERLYING TARGET DETECTION FISH

Grand Ballroom 1 (2nd Floor)

*Chairs: Paloma Gonzalez-Bellido, Cambridge University, UK and Karin Nordström, Uppsala University, Sweden*

- 10:35      **Stereo vision and prey detection in the praying mantis**  
Vivek Nityananda, University of Wisconsin, USA
- 11:05      **ITD maps and temporal precision**  
Catherine Carr, University of Maryland, USA
- 11:35      **Are feature detection and optic flow analysis segregated in crabs?**  
Julieta Sztarker, Universidad de Buenos Aires, Argentina
- 12:05      **Neural circuits for prey capture in zebrafish larvae**  
Julie Semmelhack, Max Planck Institute, Germany

VIII. THE COGNITIVE APPROACH TO BEHAVIOR AND ITS LESSONS FOR NEUROSCIENCE

Grand Ballroom 2 (2nd Floor)

*Chair: Juan Valle Lisboa, Universidad de la República, Uruguay*

- 10:35      **Evolutionary economics: Decision-making under uncertainty in chimpanzees, bonobos, and humans**  
Alexandra Rosati, Harvard University, USA
- 11:05      **What insects can tell us about the origins of consciousness**  
Andrew Barron, Department of Biological Sciences at Macquarie University, Australia
- 11:35      **Temporal memory in individual neurones in the cerebellum**  
Germund Hesslow, Lund University, Sweden
- 12:05      **Information theory and stochastic model selection in associative learning and memory**  
Charles Randy Gallistel, Rutgers University, USA

IX. NEWS ON THE SENSORY WORLD OF BIRDS

Conference Room (4th Floor)

*Chair: Christine Köppl, Carl von Ossietzky University, Germany*

- 10:35      **New Zealand kiwi and its auditory, visual and olfactory specializations for a nocturnal life**  
Jeremy Corfield, University of Alberta, Canada
- 11:05      **The quantum robin: light-dependent magnetoreception in migratory birds**  
Henrik Mouritsen, Carl von Ossietzky University, Germany



# PROGRAM

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

11:35            **New developments in the chemical ecology in a seabird model: the Leach's storm-petrel (*Oceanodroma leucorhoa*)**

Gabrielle Nevitt, UC Davis, USA

12:05            **Bigger than it looks? Sound localization cues generated by birds' heads**

Christine Köppl, Carl von Ossietzky University, Germany

12:30 - 14:00   **Lunch / CAREER-DEVELOPMENT SESSIONS**

Picasso Room (4th Floor)

**How to obtain a permanent position and tenure**

*Mentors: Andrew Barron, Macquarie University, Australia; Ari Berkowitz, University of Oklahoma, USA; Elke Buschbeck, University of Cincinnati, USA, Jean-Marc Devaud, University Paul Sabatier, France; Shreesh Mysore, Johns Hopkins University, USA*

**Publishing at early stages : how to pick the right journal and enhance your chances of publication success**

*Mentors: John Hildebrand (PNAS), Patrizia d'Ettorre (Sci Reports, Frontiers), Hans Hofmann (Behavioral Ecology), Catherine Carr (J. Neurophys), Charlotte Rutledge (Company of Biologists JEB)*

**Women in science**

*Mentors: Darcy Kelley, Columbia University, USA; Alison Mercer, University of Otago, New Zealand; Aurore Avargues-Weber, University of Toulouse, France; Daphne Soares, University of Maryland, USA; Lidia Szczupak, University of Buenos Aires, Argentina*

14:00 - 15:00   **PLENARY LECTURE 7**

Grand Ballroom 1 (2nd Floor)

*Presenter: Martin Giurfa, CNRS - University of Toulouse, France*

Andreas Nieder, University of Tübingen, Germany

**Of hairy and feathered primates - neuroethology of numerical competence in monkeys and crows**

15:00 - 15:30   **Coffee break**

15:30 - 17:30   **CONCURRENT INVITED SYMPOSIA**

**X. NEURAL MECHANISMS OF SPATIAL PERCEPTION AND NAVIGATION**

Grand Ballroom 1 (2nd Floor)

*Chair: Khaleel Razak, University of California, USA*

15:45            **Neural constructs of magnetic space lead to homing behavior in pigeons**

David Dickman, Baylor College of Medicine, USA

16:20            **The role of the midbrain SC in natural orienting behaviors of the echolocating bat**

Melville Wohlgenuth, Johns Hopkins University, USA

16:55            **Cortical mechanisms of sound localization in the pallid bat**

Khaleel Razak, UC Riverside, USA

## XI. EVOLUTIONARY MECHANISMS OF SENSORY LOSS AND REGAIN

Grand Ballroom 2 (2nd Floor)

*Chairs: Jakob Christensen-Dalsgaard, University of Southern Denmark, Denmark and Kim Hoke, Colorado State University, USA*

- 15:35      **The development and evolution of vertebrate lateral line electroreceptors**  
Clare Baker, Cambridge University, UK
- 16:05      **Loss of sweet taste in birds and re-evolution of sweet taste in hummingbirds**  
Maude Baldwin, Harvard University, USA
- 16:35      **Evolutionary reduction and regression of tympanal hearing organs in insects**  
Johannes Strauss, University of Giessen, Germany
- 17:05      **To ear or not to ear? Convergent loss of late-forming ears in toads**  
Molly Womack, Colorado State University, USA

## XII. A BRAIN WITHIN THE BRAIN: SENSORY INTEGRATION AND NETWORK LOGIC OF THE *DROSOPHILA* CIRCADIAN CLOCK

Conference Room (4th Floor)

*Chairs: Fernanda Ceriani, Institute Leloir, Argentina and Joerg Albert, University College London, UK*

- 15:35      **Circadian timing of *Drosophila* Emergence**  
John Ewer, University of Valparaiso, Chile
- 16:05      **Sensory conflict and multimodal entrainment of the *Drosophila* circadian clock**  
Ross Harper, UCL, UK
- 16:35      **The effect of diurnal rhythm on the sensitivity limit of mouse vision**  
Sanna Koskela, University of Helsinki, Finland
- 17:05      **Daily rewiring of adult networks in *Drosophila***  
Fernanda Ceriani, Leloir Institute, Argentina

17:30 - 18:00      Coffee break

18:00 - 20:00      **ISN BUSINESS MEETING**

Grand Ballroom 1 (2nd Floor)

20:00      Walk to banquet

20:00 - 24:00      **BANQUET**

Club Uruguay

Address: Peatonal Sarandi 584



# POSTER SESSION I

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

AUTHORS	ABSTRACT TITLE	POSTER
<b>ANATOMY &amp; NEUROANATOMY</b>		
Wulfila Gronenberg	Chemosensory pathways in spiders and their kin.	PI-01
Byron Van Nest	Synaptic organization in the honey bee mushroom body calyces does not predict performance on a challenging, ecologically relevant, visual learning task.	PI-02
Jitte Groothuis	Miniature Masterminds – Novel insights on Haller's rule and effects of extreme brain scaling on neural architecture in Nasonia wasps.	PI-03
Kaveri Rajaraman	Matched acoustic reception systems to unusually low frequency calls produced by a paleotropical bushcricket.	PI-04
Daphne Soares	Differences in head morphology of a cavefish and its surface ancestor as explored by microCT and microMRI.	PI-05
<b>BEHAVIORAL PLASTICITY</b>		
Marta Moita	Freezing in response to inescapable looming stimuli is sexually dimorphic.	PI-06
Elodie Urlacher	Honey bees show responses to alarm pheromone that are flexible yet consistent, and can be mimicked by treating bees with allatostatins.	PI-07
Natalia Uriarte	Role of reproductive context and pup development on the behavioral flexibility of mother rats.	PI-08
Yaara Saad	You are what you eat: Cannibalism-mediated neuromodulation of behavioral phase traits in the desert locust.	PI-09
Agustina Cano	Spatial learning in kissing bugs: appetitive and aversive conditioning.	PI-10
Arseny Finkelstein	Honey bee punishment and reward pathways: prior experience alters biogenic amine levels and modulates sucrose responsiveness.	PI-11
Corie Charpentier	The role of pH and GABAergic signaling in detection of predator chemical cues in a larval crab.	PI-12

AUTHORS	ABSTRACT TITLE	POSTER
Chris Korey	Plasticity of external setae during claw transformation in the snapping shrimp, <i>Alpheus angulosus</i> .	PI-13
CIRCADIAN RHYTHMS		
Evelyn Rieber	Behavioral and anatomical studies of daily rhythms in solitary and gregarious desert locusts.	PI-14
Iván Beltrán Arévalo	Aggressive behaviour and circadian rhythms: Behavioural analysis in the lizard <i>Gonatodes albogularis</i> .	PI-15
Diana Franco	Central vs. peripheral circadian control of oviposition in <i>Drosophila melanogaster</i> .	PI-16
Adriana Migliaro	Free running in the wild: circadian rhythmicity in electric behavior in two species of South American weakly electric fish.	PI-17
Sofia Polcowñuk	Contribution of the BMP pathway to the operation of the circadian network in adult <i>Drosophila</i> .	PI-18
María Moreno	Non-locomotion dependent nocturnal increase in the electric behavior of the weakly electric fish, <i>Gymnotus omarorum</i> .	PI-19
COMMUNICATION		
Guillermo Rehermann	Pheromone autodetection in a noctuid moth: GC-EAD response of female <i>Pseudaletia adultera</i> to its own sex pheromone components.	PI-20
Chanchal Yadav	Invitation by vibration: Social caterpillars use vibroacoustic signals to advertise 'accommodations' to potential shelter mates.	PI-21
Federico Reyes	Odour oddity: females recognize conspecific males based on olfactory cues in an annual fish with intense sexual selection.	PI-22
Philip Stoddard	Signals of electric fish encode different traits under different food regimes.	PI-23



# POSTER SESSION I

## INTERNATIONAL CONGRESS OF NEUROETHOLOGY 2016

AUTHORS	ABSTRACT TITLE	POSTER
Walter Wilczynski	Experience with social signals modifies peripheral auditory processing in green treefrogs ( <i>Hyla cinerea</i> ).	PI-24
Sharad Shanbhag	Neural Mechanisms in Acoustic Communication and Emotion: The Basolateral Amygdala of Bats and Mice.	PI-25
Joerg Henninger	Court and spark in the wild: communication at the limits of sensation.	PI-26
DECISION MAKING		
Varvara Dyakonova	Effects of physical load on decision-making and activity of serotonergic neurons in the snail <i>Lymnaea stagnalis</i> .	PI-27
Mauro Ramirez	Novelty-induced hypofagia in pigeons ( <i>Columba livia</i> ): description of behavioral responses, the effects of re-exposure and sex differences.	PI-28
Nouvian Morgane	Appetitive floral odours prevent aggression in honeybees.	PI-29
Federico Pedraja	Object detection in electrosensory learning: the action-perception loop in <i>Gnathonemus petersii</i> .	PI-30
ECOLOGY & EVOLUTION		
Kent Dunlap	Predators inhibit brain cell proliferation in natural populations of electric fish, <i>Brachyhypopomus occidentalis</i> .	PI-31
Mauricio Losilla	The transcriptional basis of divergent electric organ discharges in <i>Paramormyrops</i> electric fish.	PI-32
William Pitchers	The Genomic Basis of Signal Complexity in <i>Paramormyrops</i> electric fish.	PI-33
Rodrigo Suárez	Evolution of bilateral topography in the mammalian neocortex.	PI-34
Rüdiger Krahe	Genetic drift and natural selection as driving forces in the evolution of electric signals in weakly electric fish.	PI-35

AUTHORS	ABSTRACT TITLE	POSTER
LEARNING, MEMORY & COGNITION		
Lizeth Pedraza Correa	Training intensity during sequential contextual fear conditioning modifies the rate of systems consolidation and memory quality: Implications for consolidation of multiple memory traces.	PI-36
Heidi González	Acute Stress in <i>Neohelice granulata</i> impairs memory retrieval but no memory re-activation.	PI-37
Hans Smid	The role of dopamine and octopamine in associative learning of the parasitic wasp <i>Nasonia vitripennis</i> : effects of antagonists.	PI-38
Martín Klappenbach	Aversive and appetitive memories compete during retrieval in the crab <i>Neohelice</i> .	PI-39
Amélie Cabirol	Experience during adult brain maturation is required for the development of complex cognitive capacities in honey bees.	PI-40
María Sotelo	Spatial navigation in amphibians: Importance of the medial pallium.	PI-41
Jean-Marc Devaud	Brain plasticity and complex learning tasks in the honey bee: recruitment of specific neural circuits allows ambiguity resolution.	PI-42
Theo Mota	Octopamine and dopamine modulate appetitive visual learning in Africanized honeybees.	PI-43
Candela Medina	Study of ADF/cofilin as a regulator of actin cytoskeleton dynamics in fear memory labilization and reconsolidation.	PI-44
Christina Burden	Honey bee learning and memory impairments caused by selenium ingestion may be mediated by mechanisms in the gut.	PI-45



# POSTER SESSION I

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AUTHORS	ABSTRACT TITLE	POSTER
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